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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/874,565	06/05/2001	Gregory Stinis	SKYTYPE.002A	5514

20995 7590 08/23/2004
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EXAMINER
NGUYEN, KIMNHUNG T

ART UNIT	PAPER NUMBER
2674	7

DATE MAILED: 08/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/874,565

Applicant(s)

STINIS ET AL.

Examiner

Kimnhung Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32-41, 53 and 54 is/are allowed.
- 6) ☒ Claim(s) 1-31, 42-52, 55 and 57-72 is/are rejected.
- 7) ☒ Claim(s) 56 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3 and 6</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

This Application has been examined. The claims 1-72 are pending. The examination results are as following.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-31, 42-52, 55, and 68-72 are rejected under 35 U.S.C. 102(b) as being anticipated by Preiser (US 5,992,065 cited by Applicant).

Regarding claim 1, Preiser discloses in figure 1, a system for creating aerial messages using a plurality of aircraft (1-5), the system comprising a logic (figure 2) and processing unit configured to provide a user interface for creating aerial messages using a plurality of aircraft, wherein the logic and processing unit is located in a master aircraft (1) and sends data to and receives data from a master controller (10); a master controller (10) located in the master aircraft (1), wherein the master controller is a node on a wireless local area network (LAN) (see figure 2) channel transmitter 16 and receiver 12) and is configured to transmit data over the LAN to a plurality of slave controllers and to receive data from each of the plurality of slave controllers; a plurality of slave controllers (see figure 2, see channel transmitter, receiver and injector solenoids) located in a plurality of slave aircraft (2, 3, 4, 5 figure 1) - wherein each of the plurality of slave controllers is a node on the wireless LAN and is configured to receive data

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from and transmit data to the master controller (see figure 2) and a plurality of vapor puff creation systems located in the master aircraft and in each slave aircraft (see column 8, lines 38-43).

Regarding claims 2-4, Preiser discloses, wherein the master controller transmits data using an inherent single frequency, wherein the master controller transmits data using unlicensed spread spectrum radio frequencies (see column 3, lines 45-50), wherein master controller transmits data using a frequency hopping spread spectrum system.

Regarding claims 5, Preiser discloses, wherein master controller transmits data using a direct sequence spread spectrum system.

Regarding claims 6-8, Preiser discloses an inherent wherein each of the plurality of slave controllers is assigned a unique network address (see figure 2), wherein the unique network address of each slave controller is dynamically assigned by the logic and processing unit; and the plurality of aircraft fly in a frontline (see figure 1).

Regarding claim 9, Preiser discloses, wherein the plurality of aircraft fly in an echelon formation (see figure 1).

Regarding 10, Preiser discloses, wherein the plurality of aircraft fly in a V-shaped formation (see figure 1).

Regarding claim 11, Preiser discloses, wherein the plurality of aircraft fly in a wedge formation (see figure 1).

Regarding claim 12, Preiser discloses, wherein the plurality of aircraft fly in a vertically

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descending echelon formation (see figure 1).

Regarding claim 13, Preiser discloses wherein the wireless LAN is an Ethernet network (see transmitter and receiver, figure 2).

Regarding claim 14, Preiser discloses, wherein the logic and processing unit is further configured to determine when one of the plurality of slave aircraft travels out of a receiving range (see abstract).

Regarding claim 15, Preiser discloses, wherein the logic and processing unit is further configured to notify a user of the computer when one of the plurality of slave aircraft travels out of the receiving range (see figure 2).

Regarding claim 16, Preiser discloses, wherein the aerial message is an alphanumeric message (see column 8, lines 30-33).

Regarding claim 17, Preiser discloses, wherein the aerial message is a graphical image (see figure 1).

Regarding claim 18, Preiser discloses wherein the aerial message is a symbol (see skywriting).

Regarding claim 19, Preiser discloses a method for producing aerial messages, the method comprising transmitting puff data from a computer to a plurality of controllers located in a plurality of aircraft, the puff data including an indication of when each of the plurality of aircraft is to emit a vapor puff (see column 4, lines 33-35); and receiving status data at the computer from each of the plurality of controllers, the status data indicating whether the vapor puff was emitted by each of the plurality of aircraft.

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Regarding claim 20, Preiser discloses, wherein the computer is a laptop device (see column lines 60-61).

Regarding claim 21, Preiser discloses, wherein the computer is a handheld device (see column 5, lines 60-61).

Regarding claim 22, Preiser discloses wherein the puff data includes a time delay indicating how long to wait before emitting the vapor puff (see column 7, lines 66-67 and column 8, lines 1-3).

Regarding claims 23-26, Preiser disclose wherein the puff data includes a duration measurement indicating how wide to make the vapor puff (see column 8, lines 18-20, and vapor puff maybe color (see smoke puff, see column 2, lines 1-3).

Regarding claim 27, Preiser discloses a method for producing aerial messages using a plurality of aircraft flying in formation, the method comprising analyzing an aerial message to determine which of a plurality of aircraft should produce a vapor puff in order to form a portion of the aerial message; and transmitting data packets addressed to a controller located in each of the plurality of aircraft instructing when the aircraft should emit vapor puffs, wherein each of the data packets is transmitted over a wireless LAN to the controller as discussed above in figure 2).

Regarding claim 28, Preiser discloses, further comprising based on a flying formation, determining whether a time delay is to be associated with the vapor puff; and determining time duration to be associated with the vapor puff (see column 2, lines 62-63).

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Regarding claim 29, Preiser discloses in figure 1-2, a system for producing aerial messages using a plurality of aircraft, the system comprising a main computer (10) configured to provide a user interface for use in producing aerial messages using a plurality of aircraft 1-5, figure 1), wherein the main computer operates as a node on a wireless network to transmit data (figure 2) to and receive data from a plurality of controllers located in a plurality of aircraft; a plurality of controllers see channel transmitter , receiver and injector solenoids) located in a plurality of aircraft, wherein each of the plurality of controllers is a node on the wireless network and wherein each of the plurality of controllers is configured to process data received from the main computer; and a plurality of vapor puff creation systems located each of the plurality of aircraft (see figure 2).

—

Regarding claims 30-31, Preiser discloses wherein the main computer (10) is located in one of the plurality of aircraft (see figure 2) and located at a ground control station.

Regarding claims 42, Preiser discloses in figures 1-2, a system for creating aerial messages, the system comprising a graphical user interface configured to display one screen, wherein a user employs the displayed screen to create an aerial message; a calculation module configured to calculate a number of vapor puffs required by one or more aircraft in creating the aerial message; a database configured to store the aerial message; a data packet generation module configured to generate data packets including portions of the aerial message; and a simulation module configured to graphically simulate the creation of the aerial message (see aircraft produce the smoke or vapor, see column 1, lines 35-60).

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Regarding claims 43-45, Preiser discloses wherein the data packet generation module is further configured to transmit the data packets to one or more aircraft over a wireless network (see figure 2).

Regarding claims 46-48, Preiser discloses in figures 1-2, a data format, stored in a computer readable medium, comprising an internet protocol address portion including an address associated with a particular aircraft on a wireless network; a puff data portion including an indication of whether the particular aircraft is to produce a vapor puff; a duration measurement portion including a measurement for how wide to make the vapor puff; and 5 a time delay measurement portion including a measurement for how long to wait before creating the vapor puff as discussed above.

Regarding claim 47, Preiser discloses a data format, stored in a computer readable medium, comprising an internet protocol (IP:) address portion including an address associated with a particular node on a wireless network; a vapor level data indicator portion including an indicator that data pertaining to a measurement of vapor material remaining in a tank (engine exhaust, see abstract) of a particular aircraft is being sent in a data packet; and a vapor level data portion including the measurement of how much vapor material remains in the tank of the particular aircraft (see column 1, lines 34-60).

Regarding claims 49-52, Preiser discloses method of composing an aerial message, the method comprising displaying a first screen containing one or more characters of an aerial

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message, wherein a user selects one or more characters to compose the aerial message; in response to the user specifying an option to save the composed aerial message, creating an aerial message file, wherein the aerial message file includes a binary representation of the composed aerial message (see column 1, lines 11-20).

Regarding claim 55, Preiser discloses a method of forming characters for an aerial message, the method comprising providing an option for a user to specify a pattern of vapor puffs, wherein the specified pattern of vapor puffs forms a desired character; receiving the pattern of vapor puffs specified by the user; and translating the received pattern of vapor puffs to a binary representation of the desired character because the system is associated with a program.

Regarding claims 68, Preiser discloses a method for displaying images on a vapor screen, the method comprising determining a predefined area for an aerial vapor screen (see figure 1, and vapor material carried on each aircraft, see abstract); using software for controlling vapor emissions from a plurality of aircraft, creating an aerial vapor screen (see master aircraft carries which programmed with the message; and projecting images onto the aerial vapor screen (see display means using visible) vapor from one or more aircraft, see column 1, lines 12-14) .

Regarding claim 69, Preiser discloses wherein the images are projected from an aircraft located an inherent below the aerial vapor screen (see figure 1).

Regarding claim 70, Preiser discloses an inherent wherein the images are projected from a helicopter located below the aerial vapor screen (figure 1).

Regarding claim 71, Preiser discloses in figures 1-2, a system for composing and displaying aerial messages, the system comprising a first software module configured to permit a user of the software to compose an aerial message (see abstract, see a programmed associated with message); and a second software module configured to coordinate the display of the aerial message (see display information by skywriting, see column 1, lines 12-14).

Regarding claim 72, Preiser discloses a method for producing aerial messages, the method comprising transmitting data from a first processing unit (10) to a plurality of controllers (see channel transmitter and receiver) located in a plurality of aircraft (1-5), wherein the plurality of controllers each include a second processing unit; and receiving data at the first processing unit from each of the plurality of controllers, the received data being responsive to the data transmitted by the first processing unit (see figure 2).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made

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to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 57-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Preiser (US 5,992,065) in view of Tran et al. (US 5,883,586).

Preiser discloses every feature of the claimed invention, excluding wherein providing an option for user to specify a pattern of vapor puffs includes displaying of grid of checkboxes using a computer touch screen, pointing device, mouse device or voice commands. Tran discloses in figure 1 for displaying of grid of checkboxes using a computer touch screen (see paragraph 0038, lines 66-67) and pointing device (see touch input key, see paragraph 0038), and also having an inherent mouse device or voice command (see paragraph 0003, see paragraph 0041). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the display having touch screen with pointing device as taught by Tran into the system having aerial message of Preiser because this would for providing the operator can directly select a different desired system menu with symbol or label.

Allowable Subject Matter

5. Claims 32-41 and 53-54 are allowed.

Claim 56 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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The following is a statement of reasons for the indication of allowable subject matter:

None of the cited art teaches or suggests a control box for controlling the emission of vapor material from an aircraft, the control box comprising a second relay for opening a solenoid valve in response to a signal from the processor as claim 32, or, calculating a number of vapor puffs required by the aircraft to produce the aerial message, wherein the number of vapor puffs required is copied to the open output file; and closing the output file, wherein the output file is the aerial message file as claim 53, or in response to a user selecting an option from a main computer to switch the positions of two or more of the plurality of aircraft, redirecting data packets to the two or more of the plurality of aircraft based on a new position of the two or more aircraft in the flight formation, wherein the data packets are redirected without requiring pilots of the two or more of the plurality of aircraft to alter any settings in the two or more of the plurality of aircraft as claim 54, or adding the binary representation of the desired character to a second computer file, wherein the second computer file includes binary representations for one or more characters; and creating a graphic file of the desired character as claim 56.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimnhung Nguyen whose telephone number (703) 308-0425.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **RICHARD A HJERPE** can be reached on (703) 305-4709.

Any response to this action should be mailed to:

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Commissioner of Patents and Trademarks

Washington, D. C. 20231


Or faxed to:

(703) 872-9314 (for Technology Center 2600 only).

Hand-delivery response should be brought to: Crystal Park II, 2121 Crystal Drive,
Arlington, VA Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the Technology Center 2600 Customer Service Office whose telephone
number is (703) 306-0377.

Kimnhung Nguyen
August 21, 2004


RICHARD HJERPE 8/23/04
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600